

strong gales, heavy squalls, high sea, and from noon to 4 p. m. three hurricane-like squalls; 52° 07' N., 32° 32' W., noon, moderate W. gale, midnight, fresh NW. gale. 23rd, 50° 22' N., 38° 30' W., moderate NW. gale; 48° 23' N., 23° 54' W., stormy, rain. 24th, 47° 31' N., 30° 47' W., stormy. 25th, 46° 02' N., 37° 45' W., stormy.

TEMPERATURE OF THE AIR.

The isothermal lines on chart No. II illustrate the general distribution of the temperature of the air for the month. By a reference to the table upon the left side of the same chart it will be seen that the average for the month is slightly lower than usual for the Pacific coast. For all the other districts the average is higher, especially for the Lake region. To give an idea of the effect of the warm weather during the month, the following data, relative to sun-strokes, have been generally extracted from newspapers, and may not be strictly accurate: 1st, New York city, 1 case. 2nd, Oswego, N. Y., 1; Springfield, Mass., 1; New York city, 10. 3rd, Boston, 7, 5 fatal; New York city, 12, 1 fatal. 4th, New York city, 5. 5th, Newport, R. I., several, 1 fatal; New York city, 15, 2 fatal. 8th, New York city, 2. 9th, St. Louis, 2 fatal. 10th, St. Louis, 2 fatal; New York city, 4. 11th, St. Louis, 3 fatal; New York city, 2, 1 fatal. 12th, Cincinnati, 6, 2 fatal; St. Louis, 20, 4 fatal. 13th, Little Rock, Ark., 1 fatal; Ellston, Mo., 1 fatal; St. Louis, about 30, 16 fatal; Burlington, Iowa, 2 fatal. 14th, Dubuque, Iowa, 2; Little Rock, 2 fatal; Quincy, Ill., 7, 5 fatal; St. Louis, 41 fatal. 15th, Kirkwood, Mo., East St. Louis, and Venice, Ill., numerous; St. Paul, St. Joseph, Mo., Naples, Ill., and Chicago, 1 fatal; Omaha, many, 3 fatal; Leavenworth, 14, 6 fatal; Peoria, Ill., 2 fatal; Bloomington, Ill., 24, 4 fatal; Marquette, several; St. Louis, hundreds, 49 fatal; Nashville, numerous, 2 fatal; New York city, 2. 16th, Memphis, 1 fatal; St. Louis, 35 fatal; Dubuque, 3; DeWitt, Iowa, 2 fatal; Galesburg, Ill., several fatal; Chicago, 9 fatal; Milwaukee, 20, 3 fatal. 17th, Ottumwa, Iowa, 4, 1 fatal; St. Louis, numerous, 8 fatal; Milwaukee, 103, 9 fatal; Chicago, 59, 20 fatal; Grand Rapids, Mich., Rochester and Louisville, several; Cincinnati and Columbus, Ohio, 3; Detroit, numerous, several fatal; Wheeling, W. Va., 2 fatal; Pittsburg and Buffalo, 1 fatal; Toronto, large number. 18th, cases were frequent from the New England and Middle States westward to Missouri and Iowa; 21 fatal in St. Louis, 3 in Terre Haute and Indianapolis, Ind., 2 in Cincinnati, and 1 in Baltimore, Pittsburg and Philadelphia. 19th, frequent as on previous day, but more numerous in the Eastern States; from 1 to 3 fatal cases in many towns and cities. 20th, Memphis, 1 fatal; St. Louis, 5 fatal; Cincinnati, 3 fatal; in the Middle Atlantic and New England States, from 1 to 4 cases fatal in the larger cities. 21st, Memphis, 3 fatal; New York city, 4 fatal. 22nd, 3 fatal at Memphis. 24th, Bismarck, 1 fatal. For St. Louis, the total number of deaths reported as from sun-stroke is 163. At Iowa City, Iowa, 12th sun thermometer rose to 156°; for fifteen days the temperature in the shade rose above 86°. Ft. Yuma, Arizona Ter., the mean of the daily minima temperatures for the month is 77°; of the daily maxima temperatures, 109°.4. At Memphis, between 4 and 5 a. m., 22nd, temperature began decreasing rapidly; the past eleven days have been fearful, causing numerous deaths and a partial suspension of business.

Minimum and Maximum Temperatures, respectively: *Maine*—at Eastport, 47° and 83°; Portland, 55°, 96°; Orono, 51°, 93°. *New Hampshire*—Mt. Washington, 35°, 68°; Dunbarton, 55°, 98°; Auburn, 50°, 98°. *Vermont*—Burlington, 53°, 96°; Woodstock, 45°, 97°. *Massachusetts*—Boston, 54°, 98°; Somerset, 56°, 102°; Waltham, 46°, 96°. *Rhode Island*—Newport, 56°, 92°; Fort Adams, 54°, 91°. *Connecticut*—New Haven, 55°, 92°; Colebrook, 50°, 92°. *New York*—Albany, 54°, 92°; New York city, 61°, 94°; Oswego, 59°, 100°; West Point, 52°, 101°; Plattsburg B'ks, 49°, 92°; Buffalo, 56°, 90°. *New Jersey*—Atlantic City, 61°, 87°; Linden, 63°, 99°; Cape May, 66°, 90°. *Pennsylvania*—Philadelphia, 64°, 97°; Pittsburg, 57°, 101°; Tioga, 50°, 100°; Chambersburg, 62°, 99°. *Delaware*—Dover, 70°, 95°. *Maryland*—Baltimore, 65°, 98°; New Market, 67°, 100°; Cumberland, 60°, 92°. *District of Columbia*—Washington, 63°, 98°. *Virginia*—Norfolk, 66°, 101°; Lynchburg, 60°, 97°; Snowville, 51°, 99°. *West Virginia*—Morgantown, 56°, 95°; Helvetia, 48°, 93°. *North Carolina*—Wilmington, 66°, 97°; Cape Hatteras, 68°, 84°; Weldon, 70°, 104°; Asheville, 59°, 90°. *South Carolina*—Charleston, 73°, 95°; Spartanburg, 70°, 98°. *Georgia*—Augusta, 71°, 105°; Gainesville, 68°, 101°; Tybee Island, 71°, 98°. *Florida*—Jacksonville, 72°, 97°; Key West, 73°, 93°; Ft. Barrancas, 73°, 102°. *Alabama*—Montgomery, 73°, 100°; Mobile, 72°, 98°. *Mississippi*—Vicksburg, 71°, 100°. *Louisiana*—New Orleans, 75°, 93°; Shreveport, 71°, 98°. *Texas*—Clarksville, 73°, 101°; Galveston, 73°, 95°; San Antonio, 58°, 99°; Corsicana, 67°, 102°; Concho, 66°, 102°; Stockton, 56°, 105°; Eagle Pass, 65°, 101°. *Tennessee*—Memphis, 69°, 97°; Knoxville, 65°, 97°; near Cleveland, 70°, 99°. *Kentucky*—Louisville, 64°, 97°. *Ohio*—Cincinnati, 65°, 96°; Cleveland, 57°, 96°; Westerville, 50°, 95°; Jacksonburg, 63°, 100°. *Indiana*—Indianapolis, 58°, 96°; Vevay, 55°, 97°; New Corydon, 64°, 100°. *Illinois*—Cairo, 66°, 96°; Chicago, 59°, 97°; Hennepin, 63°, 102°; Riley, 54°, 95°. *Arkansas*—Judsonia, 73°, 96°; Mt. Ida, 72°, 94°. *Missouri*—St. Louis, 64°, 98°; Wet Glaze, 60°, 100°; Lebanon, 60°, 95°; Oregon, 58°, 94°. *Indian Territory*—Ft. Sill, 61°, 98°; Ft. Gibson, 62°, 99°. *Kansas*—Leavenworth, 61°, 100°; Dodge City, 64°, 102°; Fort Wallace, 62°, 106°; Fort Hays, 50°, 99°. *Michigan*—Detroit, 56°, 100°; Alpena, 49°, 90°; Grand Rapids, 60°, 97°; Marquette, 45°, 100°. *Wisconsin*—Milwaukee, 56°, 95°; Embarrass, 58°, 98°; Neillsville, 42°, 94°. *Iowa*—Dubuque, 55°, 96°; Tabor, 66°, 100°; Boonsboro, 62°, 104°; Nora Springs, 52°, 99°. *Minnesota*—St. Paul, 57°, 96°; Breckenridge, 49°, 97°. *Nebraska*—Omaha, 57°, 96°; Fort McPherson, 46°, 100°. *Dakota*—Yankton, 56°, 94°; Pembina, 45°, 89°; Bismarck, 47°, 100°; Fort Rice, 44°, 103°; Olivet, 55°, 104°. *Colorado*—Denver, 54°, 100°; Summit, 37°, 72°; Fort Lyon, 53°, 108°. *Wyoming Territory*—Cheyenne, 44°, 92°; Fort Sanders, 38°, 88°. *New Mexico*—Santa Fe, 50°, 95°. *Utah*—Salt Lake City,

52°, 96°; Coalville, 50°, 91°. *Nevada*—Pioche, 51°, 98°; Winnemucca, 37°, 97°; Fort McDermit, 41°, 101°. *Idaho*—Boise City, 46°, 97°. *Oregon*—Portland, 49°, 85°; Roseburg, 48°, 84°. *California*—Alcatraz Island, 47°, 69°; Fresno, 58°, 117°; Red Bluff, 54°, 105°; Campo, 35°, 102°; San Francisco, 51°, 73°; San Diego, 56°, 77°. *Arizona*—Yuma, 70°, 118°. *Montana*—Virginia City, 42°, 92°.

Ranges of Temperature.—The monthly ranges will generally appear from an examination of the above minima and maxima temperatures. The greatest daily ranges vary as follows: in New England from 19° at Wood's Holl to 33° at Burlington; Middle Atlantic States, 17° at Cape May to 28° at Lynchburg; South Atlantic States, 12° at Cape Lookout to 27° at Augusta; Gulf States, 14° at Key West to 22° at Montgomery, 27° at Corsicana and 35° at Camp Stockton; Ohio valley and Tennessee, 19° at Cairo to 33° at Pittsburgh; Lower Lake region 21° at Erie to 31° at Oswego; Upper Lake region, 20° at Milwaukee to 36° at Marquette; Upper Mississippi valley, 19° at Davenport to 26° at Dubuque; Red River of the North valley, 33° at Pembina to 36° at Breckenridge; Missouri valley, 25° at Yankton to 33° at Bismarck; Plains of Nebraska and Kansas, 31° at North Platte to 35° at Dodge City; Rocky Mountain stations, 30° at Santa Fe to 39° at Cheyenne and Virginia City; Utah, 40° at Salt Lake City; Idaho, 38° at Boise City; Nevada, 35° at Pioche to 49° at Winnemucca; California, 17° at San Diego to 21° at San Francisco, 35° at Sacramento and 58° at Campo; Oregon, 30° at Portland to 36° at Roseburg; Arizona, 40° at Yuma.

Frosts.—Coalville, Utah, on the 11th, slightly injured potato vines.

PRECIPITATION.

On chart No. III is illustrated the general distribution of the rain-fall for the month. On the left side of the same chart will be found a table giving the average precipitation for July by districts. For the Eastern Gulf States, the deficiency has been quite large. There have been decided excesses in the St. Lawrence valley, Tennessee and Lower Lake region.

Special Heavy Rains.—1st, Louisville, Ill., 5.00 in. in two hours. 1st and 2nd, New Harmony, Ind., 4.22 in. 4th, Pittsburgh, Pa., 2.80 in. in about two hours. 7th and 8th, Bellefontaine, Ohio, 3.00 in. 8th, Nashville, Tenn., 3.05 in. in 80 min. 9th and 10th, Plattsmouth, Neb., 4.81 in. 10th, Logan, Ia., 8.00 in. Buffalo, N. Y., 1.00 in. in 30 min. 10th and 11th, Beloit, Wis., 5.25 in.; Madison, Wis., 3.82 in. 11th, Tucson, Ariz., 5.10 in. in about one hour. 11th and 12th, New Corydon, Ind., 5.05 in. Riley, Ill., 4.26 in. 13th, Campo, Cal., 2.32 in. in 95 min., only rain-fall at station during month; Cape Hatteras, N. C., 2.10 in. in 90 min. 14th, Charleston, S. C., 5.14 in. in 3½ hours; Cape Lookout, N. C., 1.26 in. in 65 min. 19th, Sandy Spring, Md., 2.00 in. in one hour. 21st, New Orleans, La., 2.63 in. 21st and 22nd, Mt. Washington, N. H., 4.24 in. 22nd, San Antonio, Tex., 2.20 in. in 75 min. 22nd and 23rd, Morriston, Dak., 8.00 in. 23rd and 24th, Manhattan, Kan., 8.00 in. 26th, Hudson, Ohio, 3.00 in.; Chicago, Ill., 4.14 in.; Ruggles, Ohio, 3.20 in. 27th, Denison, Tex., 6.62 in. in two heavy storms; Coleman, Tex., 2.98 in.; Graham, Tex., 3.44 in. 27th to 29th, Fort Griffin, Tex., 6.68 in.; Decatur, Tex., 6.14 in. 28th and 29th, Wytheville, Va., 4.40 in. 29th, New Corydon, Ind., 3.71 in.; Corsicana, Tex., 2.27 in.; St. Meinrad, Ind., 5.30 in. 29th and 30th, Washington, D. C., 5.93 in., (over one inch fell from 12.30 to 1.30 p. m. of the 30th.); Fort Whipple, Va., 4.71 in. 30th, Barnegat, N. J., 3.42 in.; Accotink, Va., 3.50 in. 31st, Detroit, Mich., 2.48 in.; Cape Lookout, N. C., 1.80 in. in 60 min.; Phoenix, Arizona, 2.22 in., heaviest ever recorded.

Largest Monthly Rain-falls.—New Corydon, Ind., 14.71 inches; Logan, Iowa, 13.00 in.; Manhattan, Kan., 12.71 in.; St. Meinrad, Ind., 12.35 in.; Charleston, 12.10 in.; Emerson, Neb., 11.61 in.; Mount Washington, N. H., 11.00 in.; Cresco, Iowa, 10.92 in.; Taber, Iowa, 10.46 in.; Morriston, Dak., 10.20 in.; Denison, Tex., 9.95 in.; Bellefontaine, Ohio, 9.78 in.; Punta Rassa, 9.58 in.; Nashville, 9.43 in.; Hudson, Ohio, 9.30 in.; Henrietta, Tex., 9.13 in.

Smallest Monthly Rain-falls.—At Healdsburg, San Francisco, Sacramento, Monterey, Fresno, Visalia, Santa Barbara, Los Angeles and San Diego, Cal., Fort McDermit and Hamilton, Nev., and Camp Apache, Arizona, none; Red Bluff, Cal., light sprinkle; Burkes, Arizona, 0.03 in.; Wickenburg, Ariz., 0.09 in.; Hermosa, Col., 0.13 in.; Austin, Nev., 0.15 in.; Florence, Arizona, 0.21 in.; Yreka, Cal., and Boise City, Idaho, 0.31 in.; Pioche, Nev., 0.29 in.; Austin, Tex., and near Forsythe, Ga., 0.32 in. The observer at Dubuque reports that at Gangowen, twenty miles south of Dubuque, no rain has fallen since latter part of June.

Floods.—2d and 3d, Missouri Pacific railroad track 18 inches under water between Leavenworth and Kansas city; crops in low lands washed out and destroyed. 3d, at Atchinson, Kan., higher than for twelve years past, great damage along banks; at St. Josephs, Mo., higher than since 1844, considerable damage to railroad bridge, east abutment sunk eight to ten feet by current washing foundations. 4th, Sandy creek and portions of low-lands in Alleghany valley inundated, house swept away and five persons drowned; wash-outs on W. Pa. and Alleghany valley railroads. 9th, Rapid City, forty miles north of Deadwood, Dakota, p. m., water spout, rising river 15 feet in 1½ hour, deluging farms, carrying away bridges, two men drowned, and much damage done to freight trains. 10th, near Russell's station, Ohio, 500 feet of railroad track and bridges swept away. 11th, on Illinois Central railroad, near Seven Miles, 500 feet of track and three or four bridges washed away; Geneva Lake, Wis., rose 20 inches in eight hours, (unknown before,) flooding Kay's Park, Russells, &c.; at Genoa Junction, mill-dam carried away; along Maquoketa and Turkey rivers, Iowa, streams generally three feet higher than before recorded, doing much damage; at McGregor, Iowa, Mississippi river rose three feet, trains suspended by wash-outs, street waist deep. 12th, in Green, Sauk, Dane, Columbia, Rock